Notes from my herbarium. III.

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How I mount plants.

Plants should be mounted for the herbarium with as much care as they are collected and pressed. The æsthetic side should keep pace with the practical side of utility, and this can be done just as easily as not. It takes no more time to mount a plant well than to do it poorly. The suggestions I offer are the result of fourteen years of experience, during which I have constantly tried to do my work better and easier. They apply to the mounting of phanerogams and the pteri-

dophytes.

I do all my work sitting at my table, pasting, mounting the plants and labels, putting the sheets under a weight from time to time, etc., without rising from my seat. In this way I frequently mount from fifty to sixty sheets in an evening, many of the plants being delicate grasses and the like. On a few occasions I have mounted as many as one hundred sheets. Everything must be carefully systematized. Close to my table on the left, within easy reach of my hand, is my mounting-box resting on a chair, with the hinged front of the box dropped down. This box is full, or partly so, of sheets with the plants, labels, paper-pockets and so on, lying on each sheet, as they are to be mounted. All this work of arranging has been previously done, after the plants have been poisoned, labelled, etc. The inner dimensions of a mounting-box should be a little larger than those of a mounting sheet, in order that the sheets may be easily put in and withdrawn from the box.

Directly in front of me, on the left hand side of the table, is a board on which my mounting is done. On this I lay a couple of driers such as I use to press plants. The space directly to the right of this is devoted to the pasting of the plant. For this purpose I use sheets of a rather thin blotting paper, no smaller than a mounting sheet in size. I lay one of these sheets on the table, and I generally lay under it two or three sheets of the white paper I use in drying plants. To the right of this is my glue-pot and brush, a pair of forceps with which to pick up the smaller

plants for pasting, and a bit of stiff cardboard a foot in length and one-half an inch or so in width. I also have close by a small paper box divided into compartments and filled with slips of gummed paper of various sizes. My glue-pot, for suggestions in regard to which I am indebted to Mr. M. S. Bebb, is a marmalade jar, about which I have twisted a piece of stiff wire, raising the end some two inches above the edge, and making a loop at the end against which to lean the brush when it is not in use. I have also stretched a bit of wire across the top to take off some of the glue when there is too much on the brush. The brush is a common pasting-brush, about an inch wide at the bottom, and thin. This will do the

most delicate work. The glue-pot, with the brush resting in it, is represented in the accompanying cut. I have put a tack half way in, on the handle of the brush near the top. This catches on the wire when I rest the brush on the pot, with the handle in the loop and the bristles on the crosswire, and prevents the brush from slipping. As I

rest the brush in this way every few seconds when mounting,

this is of great service.

To the right of my chair on a small rest is a good pile of driers. To the left of my chair, out of the way of the mounting-box, is a rest on which is a board to receive the mounted plants, as will be explained hereafter. I also have ready on the table a piece of rather stiff

white paper, some five by three inches, to use when putting on the labels. From my bottle or jar of fish-glue I pour half an inch or less into the glue-pot, and then add water, stirring it up with my brush, till it is of the right consistency. I want the glue to drip off the brush when I lift it up, but not too freely. Experience is the best guide. Now I don my apron, so that I can wipe my fingers on it at any moment, draw my chair up to the table, and I am ready for work.

I lift the top sheet from the box, and lay it on the driers before me. We will imagine the plant a stiff one which can be readily lifted up. First, I take up the label and lay it face down on the blotting-paper. I put one finger on the

middle of it, and paste the four edges of the label, making as thin a margin of glue as I can conveniently do. Then I lay the brush back on the glue-pot, take up the label, and lay it on the corner of the sheet in position. I press it gently down, take the bit of white paper in hand, lay it over the label, and rub hard. The whole operation takes a comparatively few seconds, the label is in position, it is not soiled by rubbing the fingers over it, while the small amount of glue on the edges of the label keeps the corner of the sheet from curling in the slightest degree. When the label is glued all over, the sheet curls. This method I learned some years ago from

Mr. M. S. Bebb, and I most heartily endorse it.

Then I lift up the plant, reverse it, lay it on the blottingpaper, and paste it over, not too thickly, getting as little glue as possible on the blotting paper. Then I lay the plant back in position on the mounting sheet, lay over it a couple of driers from my pile on the right, and rub the hand over it a little to press the plant down. I paste on the pockets either before or after doing the plant. If the plant has a thick stem or large fruit, I lay on more than two driers, enough to make a smooth surface for the next sheet. Then I take out another sheet from the mounting box and repeat the operation. When the plant is laid on the blotting paper to be pasted, it will be found that what glue may have got on to it in pasting the previous plant has been absorbed into the sheet, . so that one lays the plant on a dry sheet, instead of on a gluey one, thereby getting glue on the upper surface of the plant. Almost all herbaria show dried glue on the plants and sheets. The plants have doubtless been pasted on pieces of newspaper, or some other kind of paper which is non-absorbent, and so the glue which remains on the paper soils the plants, unless the paper is changed for almost every plant. With a little care I can easily make a single sheet of blotting paper last for at least one hundred mounts, before throwing it away, for of course in time the sheet will become filled with the absorbed glue. If a drop of glue stands on the sheet without being absorbed, as sometimes happens, I take it up with my finger, rub my finger on my apron, and go on. I reverse the sheet of blotting paper every few minutes.

Now we come to a plant too flimsy to be lifted. Such we constantly meet with. It takes but a few seconds longer to mount it. After pasting the labels, and pockets if there are any, on the mounting sheet, I take up the blotting paper and reverse it on the sheet, making one corner and edge of the

two sheets match exactly, and then on this I lay a couple of driers. I take up the sheet with one drier under it and the two on top, and holding these in my left hand, I put my right hand on the middle of the pile and reverse it, laying the whole down again. I lift up carefully the single drier and mounting sheet, and I have the plant on the blotting paper, undisturbed, and ready to be pasted. In putting the glue on a flimsy plant, and often on a stiff one of any size, I take my strip of cardboard previously mentioned, lay it across the plant near the top, and then, with one hand on it, paste the part of the plant above it. This holds the plant well in position while I am pasting. Then I either paste the part below, or move the cardboard lower down to suit my convenience. After pasting the plant, I lay the mounting sheet on it, matching the same edges and corners as before, put the drier on top and reverse the whole. I carefully lift up the two driers and the blotting paper from the mounting sheet, and the plant is mounted in exactly the original position. This takes far less time to do than to describe. I then put the two driers on the sheet and proceed as usual.

When I have mounted a dozen sheets, more or less, according to the time taken, I take the whole pile from the board and transfer it to the board on the left, laying on the pile, as a mark, a piece of paper projecting over the edge, and then on this I lay a pile of driers, six inches or more in thickness as a weight. This is very necessary. It ensures a smooth plant and sheet when the glue is dry. There is no danger of the drier sticking to the sheet if the work is properly done. Should this happen, it is a sign of careless work, and the appearance of the sheet is injured. Every time I put a fresh pile of mounted sheets in the press, I take off the driers used for a weight, lay them in my lap till I have laid the pile on, and then replace them. If I am mounting in the evening I can take the sheets out of the press the next morning. I use the gummed strips on those parts of plants which the glue does not hold. I generally put them on after the sheets are removed from the press. For an herbarium that is to be used very much, I do not believe in putting the plants on the sheets with gummed strips alone, as the plants break much more easily when handled.

Long experience convinces me that the methods described above are the best. The object is to mount plants neatly and as rapidly as possible, and I cannot but feel that this method produces both results.

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